Journal of Research on the Lepidoptera 1(3):191-193, 1963

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LARVAL FOOD-PLANT RECORDS FOR SIX WESTERN PAPILIOS

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REPORTED ON HERE are some of our recent observations on natural and laboratory foodplants used by *Papilio eurymedon* Lucas, *P. indra indra* Reakirt, *P. indra pergamus* Edwards, *P. bairdii* Edwards, *P. oregonius* Edwards, and *P. rudkini* Comstock. Some previously reported foodplants whose authenticity has been doubted are shown to be true larval foodplants, while several new plant records for these species are reported for northern Oregon and California populations.

1. ***Papilio eurymedon.***

After a thorough review of available records, Brower (1958; 1962, *in litt.*) concluded that *Prunus* is not a foodplant of this species. The present authors (1962), however, recorded this plant as a possible foodplant for *P. eurymedon,* and several observations of *eurymedon* using *Prunus* seem to be worthy of publishing in view of the previous conflicting evidence.

While collecting in the vicinity of Frazier Park, Kern County, California, on June 30, 1962, the senior author observed what appeared to be a female *Papilio eurymedon* fluttering over a small bush of *Prunus ilicifolia.* This observation led to a search of the plant, which yielded one second-instar *Papilio* larva. This larva was brought back to the laboratory and was successfully reared on *Prunus lyoni.* It pupated on August 6 and on August 22, it produced a male *eurymedon.*

Noel McFarland (1962, *in litt.*) has also found *Prunus ilicifolia,* as well as *Rhamnus crocea,* to be foodplants of *Papilio eurymedon.* At Oak Pass in the Santa Monica Mountains of Southern California, he states: "*Prunus ilicifolia* . . . is the only plant I have ever found them on (beyond second instar) in the wild. I have often collected eggs and first instar larvae on *Rhamnus crocea.*"

At least in California, then, *Prunus ilicifolia* seems to be a natural and fully satisfactory foodplant for *Papilio eurymedon.*

2. ***Papilio indra indra.***

In his *Butterflies of North America* (1897), Edwards stated that *Artemisia dracunculoides* (Compositae) was a foodplant of *P. indra* in Colorado. Kent Wilson (1961) apparently used this record in the most recent publication of foodplants for this species. However, in 1918 J. C. Hopfinger reported that he had never found *indra* larvae on *A. dracunculoides.* He did find black *Papilio* larvae (very probably *indra*) on an

"umbelliferous species," on which he also found larvae of *P. zelicaon.* These black *"indra"* larvae would not accept *A. dracunculoides* when transferred to it.

As we reported in 1962, the foodplant of *P. indra* in the Sierra Nevada is *Pteryxia terebinthina* (formerly *Cymopterus terebinthinus*). There are many botanical records of this plant (Dr. Mildred Mathias, personal communication) for the area around Brewster, Washington, and the "umbelliferous" foodplant found by Hopfinger may well have been this species. Don Eff (1962, *in litt.*) reports the foodplant of *indra* in the Front Range of Colorado to be *Harbouria trachpleura* (Umbelliferae).

3. ***Papilio indra pergamus.***

The first known foodplant of this subspecies of *indra* was found by Comstock (1928); this was *Tauschia parishii* (Umbelliferae) in the San Gabriel Mountains.

Fred Thorne (1962, *in litt.*) has found *pergamus* eggs and larvae on *Tauschia arguta* and *Lomatium lucidum* (Umbelliferae) on Tecate Peak, San Diego County, California.

4. ***Papilio bairdii.***

Edwards (1893, 1898) found that carrot (*Daucus carota*) was somewhat acceptable to *bairdii* larvae, while the larvae "thrived" on fennel (*Foeniculum vulgare*). However, Brown (1957) states that these two plants are unacceptable to *bairdii.*

On July 27, 1962, the senior author collected 6 fifth-instar larvae and 2 fourth-instar larvae of *P. bairdii* on *Artemisia dracunculoides* (Compositae) at Barton Flats, San Bernardino County, California. In the laboratory, these larvae immediately accepted fennel when placed on this plant. Fennel and this *Artemisia* were eaten with no preference for either plant. These larvae pupated, and a male and female adult pair emerged on September 9, 1962.

5. ***Papilio oregonius.***

On September 1, 1962, both authors collected larvae of *P. oregonius* at Heppner Junction (Gilliam County) along the Columbia River, Oregon. These larvae (1 second-instar, 2 fourth-instar, and 3 fifth instar larvae) were found on *Artemisia dracunculoides.* In the laboratory, they fed readily on fennel. It was of possible biochemical interest to note that the odors of crushed leaves of these plants were similar.

6. ***Papilio rudkini.***

The natural foodplant of this species is *Thamnosma montana* (Rutaceae). But this *Papilio* has also been found on *Daucus carota* (Umbelliferae) in Yuma, Arizona (Bauer, 1955).

In April of 1962, the senior author collected ten larvae of *Papilio rudkini* on *Thamnosma montana* in Sentenac Canyon, San Diego County, California. These larvae were transferred to fennel in the laboratory, which was fairly acceptable to them (20% mortality). All refused to eat *Citrus,* which is very acceptable to *Papilio zelicaon.*

SUMMARY OF NATURAL AND LABORATORY FOODPLANTS RECORDED IN THIS PAPER

N=natural foodplant; L=acceptable as laboratory foodplant.

Papilio eurymedon	Rosaceae	
		Prunus ilicifolia (N)
		Prunus lyoni (L)
	Rhamnaceae	
		Rhamnus crocea (N)
Papilio indra indra	Umbelliferae	
		Pteryxia terebinthina (N)
		Harbouria trachpleura (N)

Previously-recorded *Artemisia dracunculoides* is dropped in this paper from the group of known foodplants of *P. indra indra.*

Papilio indra pergamus	Umbelliferae	
		Tauschia parishii (N)
		Tauschia arguta (N)
		Lomatium lucidum (N)
Papilio bairdii	Compositae	
		Artemisia dracunculoides (N)
	Umbelliferae	
		Daucus carota (L)
		Foeniculum vulgare (L)
Papilio oregonius	Compositae	
		Artemisia dramunculoides (N)
	Umbelliferae	
		Foeniculum vulgare (L)
Papilio rudkini	Rutaceae	
		Thamnosma montana (N)
	Umbelliferae	
		Daucus carota (N, but introduced plant)
		Foeniculum vulgare (L)

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